MATH 151
Mrs. Bonny Tighe

QUIZ 5
25 points
4.1-4.3

NAME _____

SECTION_____ Fri. 3/17/06

1. Find the absolute maximum and minimum values of f on the given interval.

f(x) = $x\sqrt{4-x^2}$ on [-1,2]

b) $f(x) = x + \sin 2x$ on $[0, \pi]$

2. Show that the equation f(x) = $x^3 + 3x^2 - 6x - 2$ satisfies the hypotheses of the Mean Value Theorem on the interval [0,1], and find all numbers, c, which satisfy the conclusion.

3. For what values of the constants a and b if the function has critical points at x =1 and x = -1. $y = x^3 + ax^2 + bx + 1$.

4. Find the critical numbers, intervals of increasing and decreasing, inflection points, intervals of concave up and concave down and local maximums and minimums using the first and second derivative tests.

a) f(x)= $x^5 - 5x + 3$

b) f(x) = $x + \sqrt{1-x}$